

REMARKS

The foregoing amendments and these remarks are in response to the Office Action dated September 15, 2008. Applicant hereby requests a three month extension of time for filing this response. Authorization is given to charge the appropriate fees to Deposit Account No. 50-0951.

At the time of the Office Action, claims 1-12 were pending. In the Office Action, objections were raised to the specification and abstract. Claims 1-12 were rejected under 35 U.S.C. §102(b) and 35 U.S.C. §102(e). Claims 1-12 were also rejected on the ground of nonstatutory obviousness-type double patenting. The objections and rejections are discussed in more detail below.

I. Objections to the Specification

An objection was raised to the specification for failing to include a sentence that identifies the application as a national stage application. Applicant notes that the relevant identification information is properly included in the application data sheet filed with the application, and therefore should not be additionally required in the specification. Nevertheless, an amendment to include the related application in the specification is included herein. Withdrawal of the objection is thus respectfully requested.

II. Objections to the Abstract

An objection was raised to the abstract because it was taken from the PCT publication, although a separate abstract should have been sent to USPTO by WIPO in addition to the copy filed by Applicant. The abstract on a separate page is attached hereto. Withdrawal of the objection is thus respectfully requested.

III. Rejections based upon art

Claims 1-12 are rejected under 35 U.S.C. §102(b) as being anticipated by European Patent No. 0534195 to Ruppel et al. (hereafter "*Ruppel*"). Claims 1-12 are rejected under 35 U.S.C. §102(b) as being anticipated by PCT Publication No. WO94/12274 to Shell Canada ("*Shell Canada*"). Claims 1-12 are rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent

No. 6,926,873 to Filippi et al. ("*Filippi '873*"). Claims 1-12 are rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,939,520 to Filippi et al. ("*Filippi '520*"). Claims 1-12 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-9 of *Filippi '873*. Claims 1-12 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-9 of *Filippi '520*. Applicant submits that the claims are patentable over these references.

Regarding claim 1, the claimed reactor has at least one heat exchanger made of a single tubular element having substantially parallelepiped, flattened overall dimensions. Figures 1, 2, 6 and 7 of the application give examples of what it is intended by the phrase: "substantially parallelepiped, flattened overall dimensions". This shape of the heat exchanger is not disclosed or suggested by *Ruppel*. Notably, *Ruppel* teaches to shape a tubular element in the form of a cylindrical coil, like a spiral, with a constant radius. In particular, according to *Ruppel*, the tube bundle heat exchanger is made of a plurality of concentric tube layers, each tube layer consisting of a tubular element coiled like a cylindrical spiral with predetermined angle of evolution and constant radius (see for instance figure 2, and column 5, line 55 to column 6, line 40).

In stark contrast, there is no teaching or suggestion in *Ruppel* that the shape of the tubular element should be varied to arrive at the presently claimed substantially parallelepiped, flattened overall dimensions. Thus, the subject matter of independent claim 1 is patentable over *Ruppel*. Dependent claims 2-12 are also believed to be allowable because of their dependence upon an allowable base claim, and because of the further features recited.

The above observation also applies to the rejection of claims 1-12 in view of *Shell Canada*. In this respect it is noted that the Office Action has admitted that *Shell Canada* is concerned with vertically stacked cone-shaped spiral wound or bowl-shaped spiral wound heat exchange means 3 and 4 (see for instance page 8, lines 8-10, 31-33). The geometrical configuration of the heat exchange means according to *Shell Canada* is not similar to or suggestive of the parallelepiped, flattened shape of the presently claimed tubular element.

Analogously, *Filippi '873* and *Filippi '520* are concerned with cylindrical-shaped and cone shaped spiral wound heat exchange tubes, respectively. These references thus clearly fail to

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disclose or suggest a coiled tubular heat exchanged element having parallelepiped and flattened overall dimensions as recited in claim 1.

IV. Conclusion

Applicants have made every effort to present claims which distinguish over the prior art, and it is thus believed that all claims are in condition for allowance. Nevertheless, Applicants invite the Examiner to call the undersigned if it is believed that a telephonic interview would expedite the prosecution of the application to an allowance. In view of the foregoing remarks, Applicants respectfully request reconsideration and prompt allowance of the pending claims.

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Respectfully submitted,



Mark D. Passler

Registration No. 40,764

Sarah E. Smith

Registration No. 50,488

AKERMAN SENTERFITT

Post Office Box 3188

West Palm Beach, FL 33402-3188

Telephone: (561) 653-5000